Cruise control*

Summary of functions

Use the cruise control to maintain a set speed without depressing the accelerator pedal.

- 1 Indicators
- (2) Cruise control switch

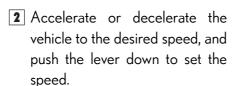


Setting the vehicle speed

1 Press the "ON•OFF" button to activate the cruise control.

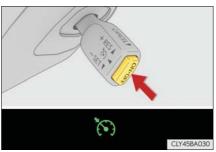
Cruise control indicator will come on.

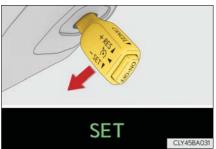
Press the button again to deactivate the cruise control.



"SET" indicator will come on.

The vehicle speed at the moment the lever is released becomes the set speed.





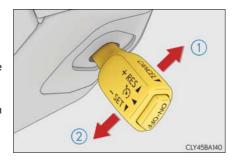
*: If equipped

To change the set speed, operate the lever until the desired set speed is obtained.

- 1 Increases the speed
- 2 Decreases the speed

Fine adjustment: Momentarily move the lever in the desired direction.

Large adjustment: Hold the lever in the desired direction.



The set speed will be increased or decreased as follows:

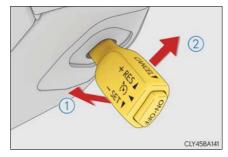
Fine adjustment: By approximately 1 mph (1.6 km/h) each time the lever is operated.

Large adjustment: The set speed can be increased or decreased continually until the lever is released.

Canceling and resuming the constant speed control

- 1 Pulling the lever toward you cancels the constant speed control.
 - The speed setting is also canceled when the brakes are applied.
- 2 Pushing the lever up resumes the constant speed control.

Resuming is available when the vehicle speed is more than approximately 25 mph (40 km/h).



■ Cruise control can be set when

- The shift lever is in the D or range 4 or higher of S has been selected.
 (except 2WD models with paddle shift switches)
- The shift lever is in D.(2WD models with paddle shift switches)
- Range 4 or higher of D has been selected by using the paddle shift.
 (2WD models with paddle shift switches)
- Vehicle speed is above approximately 25 mph (40 km/h).

Accelerating after setting the vehicle speed

- The vehicle can be accelerated normally. After acceleration, the set speed resumes
- Even without canceling the cruise control, the set speed can be increased by first accelerating the vehicle to the desired speed and then pushing the lever down to set the new speed.

■ Automatic cruise control cancelation

Cruise control will stop maintaining the vehicle speed in any of the following situa-

- Actual vehicle speed falls more than approximately 10 mph (16 km/h) below the preset vehicle speed.
 - At this time, the memorized set speed is not retained.
- Actual vehicle speed is below approximately 25 mph (40 km/h).
- VSC is activated.
- TRAC is activated for a period of time.
- When the VSC or TRAC system is turned off by pressing the VSC OFF switch.

If the warning message for the cruise control is shown on the multi-information display

Press the "ON•OFF" button once to deactivate the system, and then press the button again to reactivate the system.

If the cruise control speed cannot be set or if the cruise control cancels immediately after being activated, there may be a malfunction in the cruise control system. Have the vehicle inspected by your Lexus dealer.

■ To avoid operating the cruise control by mistake

Switch the cruise control off using the "ON•OFF" button when not in use.

■ Situations unsuitable for cruise control

Do not use cruise control in any of the following situations.

Doing so may result in loss of control and could cause an accident resulting in death or serious injury.

- In heavy traffic
- On roads with sharp bends
- On winding roads
- On slippery roads, such as those covered with rain, ice or snow
- On steep hills

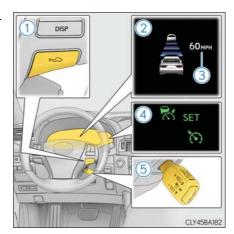
Vehicle speed may exceed the set speed when driving down a steep hill.

Dynamic radar cruise control with full-speed range*

Summary of functions

Dynamic radar cruise control with full-speed range supplements conventional cruise control with a vehicle-to-vehicle distance control. In vehicle-to-vehicle distance control mode, the vehicle automatically accelerates, decelerates or stops in order to maintain a set following distance from vehicles ahead. See cautions on P. 261

- 1 Vehicle-to-vehicle distance button
- 2 Display
- 3 Set speed
- (4) Indicators
- (5) Cruise control switch



Setting the vehicle speed (vehicle-to-vehicle distance control mode)

1 Press the "ON•OFF" button to activate the cruise control.

Radar cruise control indicator will come on and a message will be shown on the multi-information display.

Press the button again to deactivate the cruise control.

2 Accelerate or decelerate the vehicle to the desired speed, and push the lever down to set the speed.

"SET" indicator will be displayed.

The vehicle speed at the moment the lever is released becomes the set speed.

While the vehicle is in vehicle-to-vehicle distance control mode, if the lever is released when vehicle speed is less than 30 mph (50 km/h) and a vehicle ahead can be detected, the vehicle will start following the vehicle ahead at a set speed of 30 mph (50 km/h).





4

Adjusting the set speed

To change the set speed, operate the lever until the desired set speed is displayed.

1) Increases the speed

(Except when the vehicle has been stopped by system control in vehicleto-vehicle distance control mode)

(2) Decreases the speed

Fine adjustment: Momentarily move the lever in the desired direction.

Large adjustment: Hold the lever in the desired direction.



In the vehicle-to-vehicle distance control mode, the set speed will be increased or decreased as follows:

• When the set speed is shown in "MPH"

Fine adjustment: By approximately 1 mph (1.6 km/h) each time the lever is operated

Large adjustment: By approximately 5 mph (8 km/h) for each 0.75 seconds the lever is held

• When the set speed is shown in "km/h"

Fine adjustment: By approximately 0.6 mph (1 km/h) each time the lever is operated

Large adjustment: By approximately 3.1 mph (5 km/h) for each 0.75 seconds the lever is held

In the constant speed control mode (\rightarrow P. 256), the set speed will be increased or decreased as follows:

Fine adjustment: By approximately 1 mph (1.6 km/h) each time the lever is operated

Large adjustment: The set speed can be increased or decreased continually until the lever is released.

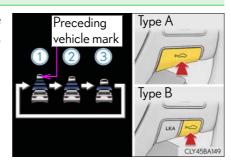
Changing the vehicle-to-vehicle distance

Pressing the button changes the vehicle-to-vehicle distance as follows:

- (1) Long
- (2) Medium
- (3) Short

The vehicle-to-vehicle distance is set automatically to long mode when the engine switch is turned to IGNITION ON mode.

If a vehicle is running ahead of you, the preceding vehicle mark will also be displayed.



4

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Vehicle-to-vehicle distance settings

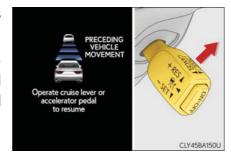
Select a distance from the table below. Note that the distances shown correspond to a vehicle speed of 50 mph (80 km/h). Vehicle-to-vehicle distance increases/decreases in accordance with vehicle speed. When the vehicle is stopped by system control, the vehicle-to-vehicle distance will be about 10 ft. (3 m) to 16 ft. (5 m) regardless of the vehicle-to-vehicle distance setting.

Distance options	Vehicle-to-vehicle distance
Long	Approximately 160 ft. (50 m)
Medium	Approximately 130 ft. (40 m)
Short	Approximately 100 ft. (30 m)

Resuming follow-up cruising when the vehicle has been stopped by system control

After the vehicle ahead of you starts off, push the lever up.

Your vehicle will also resume followup cruising if the accelerator pedal is depressed after the vehicle ahead of you starts off.



Canceling and resuming the speed control

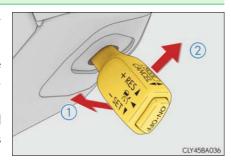
1) Pulling the lever toward you cancels the cruise control.

The setting is also canceled when the brake pedal is depressed while driving.

(When the vehicle has been stopped by system control, applying the brakes does not cancel the setting.)

2 Pushing the lever up resumes the cruise control and returns vehicle speed to the set speed.

However, when a vehicle ahead is not detected in vehicle-to-vehicle distance control mode, cruise control does not resume when the actual vehicle speed is approximately 25 mph (40 km/h) or less. Also, when the vehicle is in constant speed control mode and the actual vehicle speed is approximately 25 mph (40 km/h) or less, cruise control does not resume as the set speed is cleared.

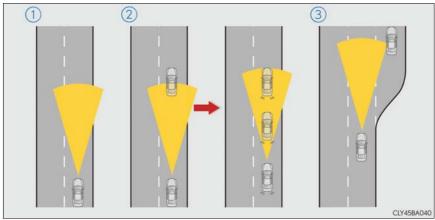


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Driving in vehicle-to-vehicle distance control mode

This mode employs a radar sensor to detect the presence of vehicles up to approximately 400 ft. (120 m) ahead, determines the current vehicle-to-vehicle following distance, and operates to maintain a suitable following distance from the vehicle ahead.

Note that vehicle-to-vehicle distance will close in when traveling on long downhill slopes.



1) Example of constant speed cruising When there are no vehicles ahead

The vehicle travels at the speed set by the driver. The desired vehicle-to-vehicle distance can also be set by operating the vehicle-to-vehicle distance control.

② Example of deceleration cruising and follow-up cruising When the vehicle ahead is driving slower than the set speed

When a vehicle is detected running ahead of you, the system automatically decelerates your vehicle. When a greater reduction in vehicle speed is necessary, the system applies the brakes. The system will respond to changes in the speed of the vehicle ahead in order to maintain the vehicle-to-vehicle distance set by the driver. A warning tone warns you when the system cannot decelerate sufficiently to prevent your vehicle from closing in on the vehicle ahead. When the vehicle ahead of you stops, your vehicle will also stop. After the vehicle ahead starts off, pushing the cruise control lever up or depressing the accelerator pedal will resume follow-up cruising.

When there are no longer any vehicles ahead driving slower than the set speed

The system accelerates until the set speed is reached. The system then returns to constant speed cruising.

Approach warning

When your vehicle is too close to a vehicle ahead, and sufficient automatic deceleration via the cruise control is not possible, the display will flash and the buzzer will sound to alert the driver. An example of this would be if another driver cuts in front of you while you are following a vehicle. Apply the brakes to ensure an appropriate vehicle-to-vehicle distance.

■ Warnings may not occur when

In the following instances, there is a possibility that the warnings will not occur:

- When the speed of the vehicle ahead matches or exceeds your vehicle speed
- When the vehicle ahead is traveling at an extremely slow speed or is stationary
- Immediately after the cruise control speed was set
- At the instant the accelerator is applied

4

Selecting conventional constant speed control mode

When constant speed control mode is selected, your vehicle will maintain a set speed without controlling the vehicle-to-vehicle distance. Select this mode only when vehicle-to-vehicle distance control mode does not function correctly due to dirt etc.

1) Press the "ON•OFF" button to activate the cruise control.

Radar cruise control indicator will come on and a message will be shown on the multi-information display.

Press the button again to deactivate the cruise control.

Switch to constant speed control mode.

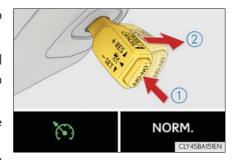
(Push the lever forward and hold for approximately 1 second.)

Cruise control indicator will come on and a message will be shown on the multi-information display.

When in constant speed control mode, to return to vehicle-to-vehicle distance control mode, push the lever forward again and hold for approximately 1 second.

After the desired speed has been set, it is not possible to return to vehicle-to-vehicle distance control mode.

If the engine switch is turned off and then turned to IGNITION ON mode again, the vehicle will automatically return to vehicle-to-vehicle distance control mode.



Canceling and resuming the speed setting: \rightarrow P. 253

Dynamic radar cruise control with full-speed range can be set when

- The shift lever is in the D or range 4 or higher of S has been selected.
 (except 2WD models with paddle shift switches)
- The shift lever is in D.(2WD models with paddle shift switches)
- Range 4 or higher of D has been selected by using the paddle shift.
 (2WD models with paddle shift switches)
- Vehicle speed is above approximately 30 mph (50 km/h).

■ Accelerating after setting the vehicle speed

The vehicle can accelerate normally. After acceleration, the set speed resumes. However, during vehicle-to-vehicle distance control mode, the vehicle speed may decrease below the set speed in order to maintain the distance to the vehicle ahead.

4

■ Automatic cancelation of vehicle-to-vehicle distance control

Vehicle-to-vehicle distance control driving is automatically canceled in the following situations:

- Actual vehicle speed falls below approximately 25 mph (40 km/h) when there are no vehicle ahead.
- The preceding vehicle leaves the lane when your vehicle is following at a speed below 25 mph (40 km/h).
- VSC is activated.
- TRAC is activated for a period of time.
- When the VSC or TRAC system is turned off by pressing the VSC OFF switch.
- The sensor cannot operate correctly because it is covered in some way.
- The windshield wipers are operating at high speed (when the wiper switch is set to the "AUTO" mode or the high speed wiper operation position).
- When snow mode is set.
- The parking brake is operated.
- The vehicle is stopped by system control on a steep incline.
- Pre-collision brake assist is activated.
- The following are detected when the vehicle has been stopped by system control:
 - The driver is not wearing a seat belt.
 - The driver's door is opened.
 - The trunk or hood is opened.
- The vehicle has been stopped for about 3 minutes.

If vehicle-to-vehicle distance control driving is automatically canceled for any other reason, there may be a malfunction in the system. Contact your Lexus dealer.

The cruise control will stop maintaining the vehicle speed in the following situations:

- Actual vehicle speed is more than approximately 10 mph (16 km/h) below the set vehicle speed.
 - At this time, the memorized set speed is not retained.
- Actual vehicle speed falls below approximately 25 mph (40 km/h).
- VSC is activated.
- TRAC is activated for a period of time.
- When the VSC or TRAC system is turned off by pressing the VSC OFF switch.

■ When the LKA (Lane-Keeping Assist) will be activated

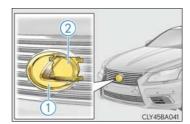
Using the radar cruise control in vehicle-to-vehicle distance control mode, lane keeping assistance control is activated.

■ Radar sensor and grille cover

Always keep the sensor and grille cover clean to ensure that the vehicle-to-vehicle distance control operates properly. (Some obstructions, such as snow, ice and plastic objects, cannot be detected by the obstruction sensor.)

Dynamic radar cruise control with full-speed range is canceled if an obstruction is detected.

- (1) Grille cover
- 2 Radar sensor



Warning messages and buzzers for dynamic radar cruise control with full-speed range

Warning messages and buzzers are used to indicate a system malfunction or to inform the driver of the need for caution while driving. $(\rightarrow P. 816)$

4

■ Certification

► For vehicles sold in the U.S.A.

FCC ID: HYQDNMWR004

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC WARNING

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Radiofrequency radiation exposure Information:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with minimum distance of 20 cm between the radiator (antenna) and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

▶ For vehicles sold in Canada

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

CAUTION

Dynamic radar cruise control with full-speed range is designed to detect motor vehicles intended for use on public highways, with the exception of motorcycles. It will not detect: stationary objects, pedestrians, motorcycles, bicycles, animals, and similarly sized, or smaller, moving objects. The driver must always be aware of surroundings and in control of the vehicle.

■ Before using dynamic radar cruise control with full-speed range

Do not overly rely on vehicle-to-vehicle distance control.

Be aware of the set speed. If automatic deceleration/acceleration is not appropriate, adjust the vehicle speed, as well as the distance between your vehicle and vehicles ahead, by applying the brakes etc.

■ Cautions regarding the driving assist systems

Observe the following precautions.

Failure to do so may cause an accident resulting in death or serious injury.

The system, even in vehicle-to-vehicle distance control mode, only assists the driver:

To measure following distance

The dynamic radar cruise control with full-speed range is only intended to help the driver in determining the following distance between the driver's own vehicle and a designated vehicle traveling ahead. It is not a mechanism that allows careless or inattentive driving, and it is not a system that can assist the driver in low-visibility conditions. It is still necessary for driver to pay close attention to the vehicle's surroundings.

To judge proper following distance

The dynamic radar cruise control with full-speed range determines whether the following distance between the driver's own vehicle and a designated vehicle traveling ahead is appropriate or not. It is not capable of making any other type of judgement. Therefore, it is absolutely necessary for the driver to remain vigilant and to determine whether or not there is a possibility of danger in any given situation.

● To operate the vehicle

The dynamic radar cruise control with full-speed range cannot prevent or avoid all collisions. Therefore, if there is ever any danger, the driver must take immediate and direct control of the vehicle and act appropriately in order to ensure the safety of all involved.

4

To avoid inadvertent dynamic radar cruise control with full-speed range activation

Switch the cruise control off using the "ON•OFF" button when not in use.

■ Situations unsuitable for dynamic radar cruise control with full-speed range

Do not use dynamic radar cruise control with full-speed range in any of the following situations.

Doing so may result in inappropriate speed control and could cause an accident resulting in death or serious injury.

- In heavy traffic
- On city streets
- On roads with sharp turns
- On winding roads
- On slippery roads, such as those covered with rain, ice or snow
- On steep downhills, or where there are sudden changes between sharp up and down gradients

Vehicle speed may exceed the set speed when driving down a steep hill.

- At entrances to expressways
- When weather conditions are bad enough that they may prevent the sensors from functioning correctly (fog, snow, sandstorm, heavy rain, etc.)
- When an approach warning buzzer is heard often
- In areas where the driver is likely to encounter pedestrians, motorcyclists, bicyclists, animals, stationary objects or other people/objects not detectable by the system. (→P. 261)

■ When the sensor may not be correctly detecting a vehicle ahead

Apply the brakes as necessary when any of the following types of vehicles are in front of you.

As the sensor may not be able to correctly detect these types of vehicles, the approach warning (\rightarrow P. 255) will not be activated, and a fatal or serious accident may result.

- Vehicles traveling at low speeds
- Vehicles that are stationary
- Motorcycles traveling in the same lane
- Vehicles with small rear ends (trailers with no load on board etc.)
- Vehicles that cut in suddenly

Details about other people/objects the system will not detect: ¬P 261

Conditions under which the vehicle-to-vehicle distance control may not function correctly

Apply the brakes as necessary in the following conditions as the radar sensor may not be able to correctly detect vehicles ahead, and a fatal or serious accident may result:

- When water or snow splashed by the surrounding vehicles hinders the functioning of the sensor
- When your vehicle is tilted upwards (due to a heavy load in the trunk etc.)
- When the road curves or when the lanes are narrow
- When steering wheel operation or your position in the lane is unstable
- When the vehicle ahead decelerates suddenly as the system is not able to respond to sudden braking.

Details about limitations:

 \rightarrow P. 261

Details about unsuitable conditions:

→P. 262

■ Handling the radar sensor

Observe the following to ensure the cruise control system can function effectively. Otherwise, the system may not function correctly and could result in an accident.

- Keep the sensor and grille cover clean at all times.
 Clean the sensor and grille cover with a soft cloth so you do not mark or damage them.
- Do not subject the sensor or surrounding area to a strong impact. If the sensor moves even slightly off position, the system may malfunction. If the sensor or surrounding area is subject to a strong impact, always have the area inspected and adjusted by your Lexus dealer.
- Do not disassemble the sensor.
- Do not attach accessories or stickers to the sensor, grille cover or surrounding area.
- Do not modify or paint the sensor and grille cover.
- Do not replace the sensor or grill cover with non-genuine parts.

LKA (Lane-Keeping Assist)^{*}

Summary of functions

While driving on a freeway or motor highway that has lane markers and no sharp curves, the system recognizes the lanes using a camera located above the inside rear view mirror as a sensor to assist the driver with staying in the lane. The LKA system has two functions.

Camera sensor

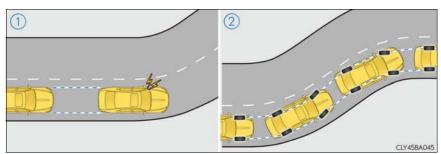


4

Driving

*: If equipped

Functions included in the LKA



1 Lane departure warning function

If the system judges that the vehicle may deviate from its lane, it alerts the driver using rapid beeping, indications on the multi-information display, and a sensory warning* given via the steering wheel.

- *: A slight steering torque is applied for a short period of time in the direction of the center of the lane.
- 2 Lane keeping assist function
 - This function will be active when the vehicle-to-vehicle distance control mode of the dynamic radar cruise control with full-speed range (→P. 248) is set with vehicle speed above approximately 45 mph (72 km/h) and while the lane departure warning function is active.
 - When the lane keeping assist function is active, a slight steering torque will be applied, to help the driver maintain the vehicle inside the lane.

The lane keeping assist function will be temporarily canceled if the steering wheel is not operated, or if you continue driving with your hands lightly touching the steering wheel. $(\rightarrow P. 270)$

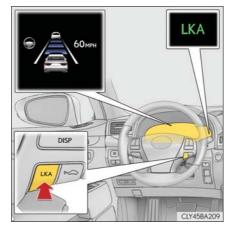
Turning the LKA system on

Press the LKA switch to activate the system.

LKA indicator will come on.

Press the switch again to turn the LKA system off.

The LKA system will revert to off each time the engine switch is turned to IGNITION ON mode.



4

Operating conditions for each function

■ Lane departure warning function

- When the vehicle speed is approximately 30 mph (48 km/h) or more
- When the lane width is more than approximately 9.1 ft. (2.8 m)
- When driving on a straight road or through a curve with a radius of more than approximately 394 ft. (120 m)

■ Lane keeping assist function

- When the vehicle speed is between approximately 45 and 112 mph (72 and 180 km/h)
- When the vehicle-to-vehicle distance mode of the dynamic radar cruise control with full-speed range is on, and the set vehicle speed is approximately 45 mph (72 km/h) or more (the function will not operate when the dynamic radar cruise control with full-speed range is in set speed mode)
- When the lane width is between approximately 9.8 and 13.1 ft. (3.0 and 4.0 m)
- When driving on a straight road or through a curve with a radius of more than approximately 656 ft. (200 m)

Indication on the multi-information display

When the LKA system is on, the lane line display and steering wheel display are shown.

1 Lane keeping assist function operation indication

Steering wheel displayed:

Indicates that the function is currently operating. (If the lane departure warning operates at this time, the steering wheel flashes orange.)

Steering wheel not displayed:

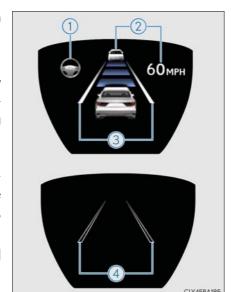
Indicates that the function is not currently operating. (When the lane keeping assist function is canceled, the buzzer will beep twice.)

- 2 Dynamic radar cruise control with full-speed range display
- 3 Lane departure warning function indication (when the inside of the white line is white):

The function has recognized lane markers. (If the lane departure warning operates at this time, the lines flash orange.)

4 Lane departure warning function indication (when the inside of the white line is black):

A lane marker is not recognized by the system, or the LKA system functions are temporarily canceled.



4

■ Temporary cancelation of the LKA system functions

If any of the following occurs, the LKA system functions will be temporarily canceled. The functions will resume after the necessary operating conditions have returned.

- The steering wheel is turned as far as necessary to cause the vehicle to change lanes.
- When the system detects no-handed driving. (The lane keeping assist function will be temporarily canceled, but the lane departure warning function will continue.)
- The turn signal lever is operated.
- The vehicle speed deviates from the operating range of the LKA system functions.
 (The buzzer will beep twice when the lane keeping assist function is being canceled.)
- When the lane lines cannot be recognized while driving.
- When the wiper switch is in the high speed position or is set to "AUTO" mode with the wipers operating at high speed. (The lane keeping assist function will be temporarily canceled, but the lane departure warning function will continue.)
- If the vehicle crosses a line for approximately half a minute or more. (The lane keeping assist function will be temporarily canceled, but the lane departure warning function will continue.)
- When the lane departure warning function is activated.
 The lane departure warning function will not operate again for several seconds after it has been activated, even if the vehicle leaves the lane again.

■ The lane departure warning

It may be difficult to feel the sensory warning depending on the road conditions.

■ No-handed driving warning

If the steering wheel is not operated for approximately 15 seconds on a straight road or approximately 5 seconds on a curve, the buzzer will beep twice, indicators on the multi-information display will flash, and the lane keeping assist function will be temporarily canceled. If you drive the vehicle with your hands lightly touching the steering wheel, this may also be detected as no-handed driving.

■ After the vehicle has been parked in the sun

The LKA system functions may not be available and a warning message (\rightarrow P. 816) will be displayed for a while after driving has started. In such cases, turn the LKA system off and turn it on again after normal temperature returns. When the temperature in the cabin decreases and the temperature around the camera sensor (\rightarrow P. 265) becomes suitable for its operation, the functions will begin to operate.

■ If there are lane markers on only one side of the vehicle

The lane keeping assist function will not operate. Also, the lane departure warning will not operate for the side on which lane markers could not be recognized.

■ Conditions in which the function may not operate correctly

In the following conditions, the LKA system functions may not operate, or it may not be possible to ensure adequate performance. Also, the camera sensor may be unable to recognize lane lines causing the lane departure warning function to operate incorrectly, or the lane keeping assist function may not operate properly. However, this does not indicate a malfunction.

- When driving through an area with no lane markers, such as a tollbooth, a crossing or before a ticket checkpoint
- When driving on a sharp curve
- When lanes are extremely narrow or extremely wide
- When the vehicle leans to one side an unusual amount due to a heavy load or improper tire inflation pressure
- When the following distance between your vehicle and the vehicle ahead is extremely short
- When the lane markers are yellow (These may be more difficult for the system to recognize compared to white markers.)
- When the lane markers are broken, "Botts' dots", "Raised pavement marker" or stones
- When lane markers are obscured or partially obscured by sand, dirt, etc.
- When there are shadows on the road running parallel with lane markers, or if a shadow covers the lane markers
- When driving on a particularly bright road surface, such as concrete
- When driving on a road surface that is bright due to reflected light
- When driving in a location where the light level changes rapidly, such as the entrance to or exit from a tunnel
- When sunlight or the headlights of oncoming vehicles are shining directly into the camera lens
- When driving on roads that are branching or merging

- When driving on a road surface that is wet due to rain, previous rainfall, standing water, etc.
- When the vehicle experiences strong up-and-down motion such as when driving on an extremely rough road or on a seam in the pavement
- When headlight brightness at nighttime is reduced due to dirt on the lenses, or when the headlights are misaligned
- When driving with a strong crosswind
- When driving on winding roads or roads that are uneven
- When driving on rough or unpaved roads

■ When changing the tires

Depending on the tires used, sufficient performance may not be maintainable.

■ Warning messages for LKA

Warning messages are used to indicate a system malfunction or to inform the driver of the need for caution while driving. $(\rightarrow P. 816)$

A CAUTION

■ Before using the LKA system

Do not rely solely on the LKA system. The LKA system does not drive the vehicle automatically, nor does it reduce the amount of care you need to take. As such, the driver must always assume full responsibility for understanding his/her surroundings, for operating the steering wheel to correct the driving line, and for driving

Inappropriate or negligent driving could lead to an accident.

■ To avoid operating the LKA by mistake

Switch the LKA off using the LKA switch when not in use.

■ Situations unsuitable for LKA

Do not use LKA in any of the following situations.

Otherwise, the system may not function correctly and could result in an accident.

- When driving with snow tires, tire chains, a spare tire, or similar equipment
- When the tires have been excessively worn, or when the tire inflation pressure is
- When there are objects or structures along the roadside that might be misinterpreted as lane markers (such as guardrails, curb, reflector posts, etc.)
- When driving on snowy roads
- When pavement lane markers are difficult to see due to rain, snow, fog, sand, dirt,
- When there are visible lines on the pavement from road repairs, or if the remains of old lane markers are still visible on the road
- When driving on slippery roads, such as those covered with rain, ice or snow
- When driving in a lane other than the driving or passing lanes on a freeway or
- When driving on a road with lane closures due to maintenance, or when driving in a temporary lane

♠ NOTICE

■ To prevent damage to or incorrect operation of the LKA system

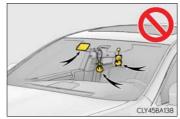
- Do not modify the headlights or attach stickers to the surface of the lights.
- Do not modify the suspension, or replace them with non-genuine parts.
- Do not install or place anything on the hood or the grille. Also, do not install a grille guard (bull bars, kangaroo bar etc.).
- Do not modify the sun visor or replace it with anything other than a genuine Lexus product.
- If your windshield needs repairs, contact your Lexus dealer.

⚠ NOTICE

\blacksquare Camera sensor (\rightarrow P. 265)

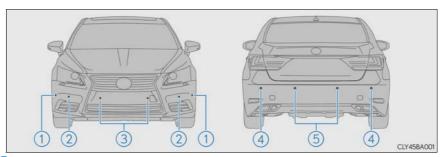
Observe the following to ensure that the LKA system functions correctly.

- Keep the windshield clean at all times.
 Performance could be affected if the windshield is dirty, or if raindrops, condensation or ice are adhering to the windshield.
- Do not attach a sticker or other items to the windshield near the camera sensor.
- Do not install or place anything near the camera.



- Do not attach window tinting to the windshield.
- Do not install an antenna in front of the camera lens.
- If the windshield is fogged up, use the windshield defogger to remove fog from the windshield.
 - When it is cold, using the heater with air blowing to the feet may allow the upper part of the windshield to fog up. This will have a negative effect on the images.
- Do not place anything on the dashboard.
 The camera sensor may recognize the image reflected on the windshield as lane markers by mistake.
- Do not scratch the camera lens, or let it get dirty.
 When cleaning the inside of the windshield, be careful not to get any glass cleaner etc. on the lens. Also, do not touch the lens.
 For lens repair, contact your Lexus dealer.
- Do not change the installation position or direction of the camera sensor or remove it. The direction of the camera sensor is precisely adjusted.
- Do not subject the camera sensor to strong impact or force, and do not disassemble the camera sensor.

■ Types of sensors

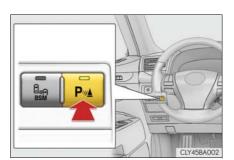


- 1 Front side sensors
- 2 Front corner sensors
- 3 Front center sensors
- 4 Rear corner sensors
- 5 Rear center sensors

■ Intuitive parking assist switch

Turns the intuitive parking assist on/off

When on, the indicator light comes on and the buzzer sounds to inform the driver that the system is operational.



4

Display

When the sensors detect an obstacle, a graphic is shown on the multiinformation display and Remote Touch screen depending on the position and distance to the obstacle.

■ Multi-information display

- 1 Front side and front corner sensor detection
- 2 Front center sensor detection
- (3) Rear corner sensor detection
- 4 Rear center sensor detection



■ Remote Touch screen

A graphic will be shown on the side display

A graphic is automatically displayed when an obstacle is detected. The screen can be set so that the graphic is not displayed. (\rightarrow P. 281)



Sensor detection display, obstacle distance

■ Front center sensor

Approximate distance to obstacle	Multi- information display	Remote Touch screen
3.3 ft. (100 cm) to 1.6 ft. (50 cm)	(continuous)	(continuous)
1.6 ft. (50 cm) to 1.2 ft. (37.5 cm)	(continuous)	(continuous)
1.2 ft. (37.5 cm) to 1.0 ft. (30 cm)	(continuous)	(continuous)
Less than 1.0 ft. (30 cm)	(blinking)	(continuous)

■ Corner sensors and side sensors

Approximate distance to obstacle	Multi- information display	Remote Touch screen
Front side sensor: 1.6 ft. (50 cm) to 1.2 ft. (37.5 cm) Front corner sensor and rear corner sensor: 2.0 ft. (60 cm) to 1.2 ft. (37.5 cm)	(continuous)	(continuous)
Front side sensor and front corner sensor: 1.2 ft. (37.5 cm) to 1.0 ft. (30 cm) Rear corner sensor: 1.2 ft. (37.5 cm) to 0.8 ft. (25 cm)	(continuous)	(continuous)
Front side sensor and front corner sensor: Less than 1.0 ft. (30 cm) Rear corner sensor: Less than 0.8 ft. (25 cm)	(blinking)	(continuous)

■ Rear center sensor

Approximate distance to obstacle	Multi-information display	Remote Touch screen
4.9 ft. (150 cm) to 2.0 ft. (60 cm)	(continuous)	(continuous)
2.0 ft. (60 cm) to 1.5 ft. (45 cm)	(continuous)	(continuous)
1.5 ft. (45 cm) to 1.1 ft. (35 cm)	(continuous)	(continuous)
Less than 1.1 ft. (35 cm)	(blinking)	(continuous)

4

■ Buzzer operation and distance to an obstacle

A buzzer sounds when the sensors are operating.

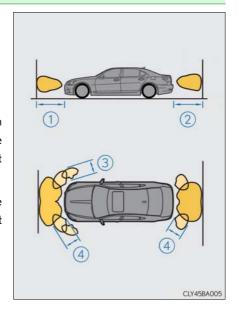
- The buzzer beeps faster as the vehicle approaches an obstacle. When the vehicle comes within the following distance of the obstacle, the buzzer sounds continuously:
 - Front center sensors: Approximately 1.0 ft. (30 cm)
 - Front side and front corner sensors: Approximately 1.0 ft. (30 cm)
 - Rear center sensors: Approximately 1.1 ft. (35 cm)
 - Rear corner sensors: Approximately 0.8 ft. (25 cm)
- When 2 or more obstacles are detected simultaneously, the buzzer system responds to the nearest obstacle. If one or both come within the above distances, the beep will repeat a long tone, followed by fast beeps.

Detection range of the sensors

- 1 Approximately 3.3 ft. (100 cm)
- 2 Approximately 4.9 ft. (150 cm)
- 3 Approximately 1.6 ft. (50 cm)
- 4 Approximately 2.0 ft. (60 cm)

The diagram shows the detection range of the sensors. Note that the sensors cannot detect obstacles that are extremely close to the vehicle.

The range of the sensors may change depending on the shape of the object etc.

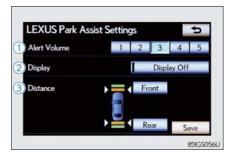


Setting up intuitive parking assist

You can change the warning beep volume and Remote Touch screen operating conditions.

- 1 Press the "MENU" button on the Remote Touch. $(\rightarrow P. 348)$
- 2 Select "SETUP" on the "Menu" screen.
- 3 Select "Vehicle" on the "Setup" screen.
- 4 Select "Lexus Park Assist" on the "Vehicle Settings" screen.
 - 1 Alert volume setting
 - 2 Display on/off
 - 3 Alert distance setting

Make sure to save after changing settings.



4

■ Alert volume setting

The alert volume can be adjusted.

- 1 Select "1" to "5" on the "LEXUS Park Assist Settings".
- 2 Select "Save".

■ Display on/off setting

On or off can be selected for intuitive parking assist display.

1 Select "Display Off".

When the "Display Off" indicator is turned on, the display of intuitive parking assist will be off. Select "Display Off" again to turn the display of intuitive parking assist on.

2 Select "Save".

■ Alert distance setting

Front or rear center sensors display and tone indication can be set.

1 Select "Front" or "Rear".

Long distance or short distance can be selected.

2 Select "Save".

■ The intuitive parking assist can be operated when

- Front side sensors:
 - The engine switch is in IGNITION ON mode.
 - The shift lever is in a position other than P.
 - The vehicle speed is less than approximately 6 mph (10 km/h).
- Front corner and front center sensors:
 - The engine switch is in IGNITION ON mode.
 - The shift lever is in a position other than P or R.
 - The vehicle speed is less than approximately 6 mph (10 km/h).
- Rear corner and rear center sensors:
 - The engine switch is in IGNITION ON mode.
 - The shift lever is in R.

- The sensor's detection areas are limited to the areas around the vehicle's front corner and rear bumpers.
- Certain vehicle conditions and the surrounding environment may affect the ability
 of the sensor to correctly detect obstacles. Particular instances where this may
 occur are listed below.
 - There is dirt, snow or ice on the sensor. (Wiping the sensors will resolve this problem.)
 - The sensor is frozen. (Thawing the area will resolve this problem.)
 In especially cold weather, if a sensor is frozen the screen may show an abnormal display, or obstacles may not be detected.
 - The sensor is covered in any way.
 - The vehicle is leaning considerably to one side.
 - On an extremely bumpy road, on an incline, on gravel, or on grass.
 - The vicinity of the vehicle is noisy due to vehicle horns, motorcycle engines, air brakes of large vehicles, or other loud noises producing ultrasonic waves.
 - There is another vehicle equipped with parking assist sensors in the vicinity.
 - The sensor is coated with a sheet of spray or heavy rain.
 - The vehicle is equipped with a fender pole or wireless antenna.
 - Towing eyelet is installed.
 - The bumper or sensor receives a strong impact.
 - The vehicle is approaching a tall or curved curb.
 - In harsh sunlight or intense cold weather.
 - The area directly under the bumpers is not detected.
 - If obstacles draw too close to the sensor.
 - A non-genuine Lexus suspension (lowered suspension etc.) is installed.
 - People may not be detected if they are wearing certain types of clothing.

In addition to the examples above, there are instances in which, because of their shape, signs and other objects may be judged by the sensor to be closer than they are.

4

- The shape of the obstacle may prevent the sensor from detecting it. Pay particular attention to the following obstacles:
 - Wires, fences, ropes, etc.
 - · Cotton, snow and other materials that absorb sound waves
 - Sharply-angled objects
 - Low obstacles
 - Tall obstacles with upper sections projecting outwards in the direction of your vehicle
- The following situations may occur during use.
 - Depending on the shape of the obstacle and other factors, the detection distance may shorten, or detection may be impossible.
 - Obstacles may not be detected if they are too close to the sensor.
 - There will be a short delay between obstacle detection and display. Even at slow speeds, there is a possibility that the obstacle will come within the sensor's detection areas before the display is shown and the warning beep sounds.
 - Thin posts or objects lower than the sensor may not be detected for collision when approached, even if they have been detected once.
 - It might be difficult to hear beeps due to the volume of audio system or air flow noise of air conditioning system.

■ If a message is displayed on the multi-information display

→P. 816

■ Certification

► For vehicles sold in the U.S.A.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions; (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

► For vehicles sold in Canada

This ISM device complies with Canadian ICES-001.

Cet appareil ISM est conforme a la norme NMB-001 du Canada.

■ When using the intuitive parking assist

Observe the following precautions.

Failing to do so may result in the vehicle being unable to be driven safely and possibly cause an accident.

- Do not use the sensor at speeds in excess of 6 mph (10 km/h).
- The sensors' detection areas and reaction times are limited. When moving forward or reversing, check the areas surrounding the vehicle (especially the sides of the vehicle) for safety, and drive slowly, using the brake to control the vehicle's speed.
- Do not install accessories within the sensors' detection areas.

№ NOTICE

■ When using intuitive parking assist-sensor

In the following situations, the system may not function correctly due to a sensor malfunction etc. Have the vehicle checked by your Lexus dealer.

- The intuitive parking assist operation display flashes, and a beep sounds when no obstacles are detected.
- If the area around a sensor collides with something, or is subjected to strong impact.
- If the bumper collides with something.
- If the display shows continuously without a beep.
- If a display error occurs, first check the sensor.
 If the error occurs even if there is no ice, snow or mud on the sensor, it is likely that the sensor is malfunctioning.

■ Notes when washing the vehicle

Do not apply intensive bursts of water or steam to the sensor area.

Doing so may result in the sensor malfunctioning.

4

Rear view monitor system

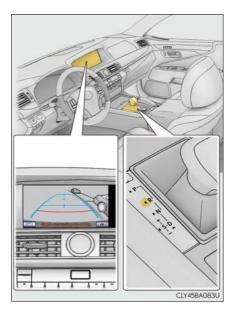
The rear view monitor system assists the driver by displaying guide lines and an image of the view behind the vehicle while backing up, for example while parking.

The screen illustrations used in this text are intended as examples, and may differ from the image that is actually displayed on the screen.

The rear view image is displayed when the shift position is in R and the engine switch is in IGNITION ON mode.

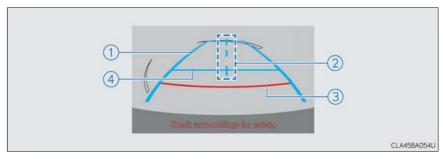
The rear view monitor system will be deactivated when the shift lever is in any position other than R.

When the shift lever is shifted to the R position and any mode button (such as "MENU") is pressed, the rear view monitor system is canceled, and the screen is switched to the mode of the button that was pressed.



Guide lines are displayed on the screen.

Guide lines shown differ from those shown on the actual screen.



1 Vehicle width extension guide line (blue)

The line indicates a guide path when the vehicle is being backed straight up. The displayed width is wider than the actual vehicle width.

Vehicle center guide lines

These lines indicate the estimated vehicle center on the ground.

3 Distance guide line (red)

This line indicates a position on the ground about $1.5\,\mathrm{ft.}\ (0.5\,\mathrm{m})$ behind on the ground of the rear bumper of your vehicle.

4 Distance guide line (blue)

This line indicates a position on the ground about 3 ft. (1 m) behind on the ground of the rear bumper of your vehicle.

4

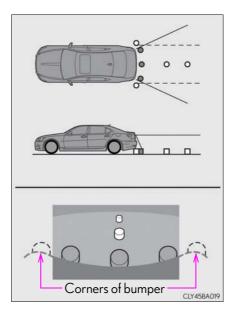
Rear view monitor system precautions

■ Area displayed on screen

The rear view monitor system displays an image of the view from the bumper of the rear area of the vehicle.

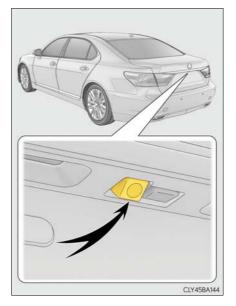
To adjust the image on the rear view monitor system screen. $(\rightarrow P. 352)$

- The area displayed on the screen may vary according to vehicle orientation conditions.
- Objects which are close to either corner of the bumper or under the bumper cannot be seen on the screen.
- The camera uses a special lens. The distance of the image that appears on the screen differs from the actual distance.
- Items which are located higher than the camera may not be displayed by the monitor.



■ Rear view monitor system camera

The camera for the rear view monitor system is located above the license plate.



• Using the camera

If the camera lens becomes dirty, it cannot transmit a clear image. If water droplets, snow or mud adhere to the lens, rinse with water and wipe with a soft cloth. If the lens is extremely dirty, wash it with a mild cleanser and rinse.

■ Differences between the screen and the actual road

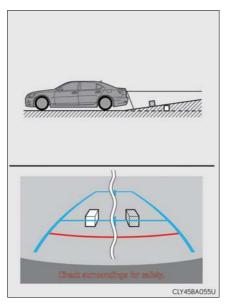
The distance guide lines and the vehicle width extension guide lines may not actually be parallel with the dividing lines of the parking space, even when they appear to be so. Be sure to check visually.

The distances between the vehicle width extension guide lines and the left and right dividing lines of the parking space may not be equal, even when they appear to be so. Be sure to check visually.

The distance guide lines give a distance guide for flat road surfaces. In any of the following situations, there is a margin of error between the guide lines on the screen and the actual distance/course on the road.

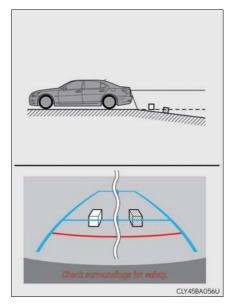
• When the ground behind the vehicle slopes up sharply

The distance guide lines will appear to be closer to the vehicle than the actual distance. Because of this, objects will appear to be farther away than they actually are. In the same way, there will be a margin of error between the guide lines and the actual distance/course on the road.

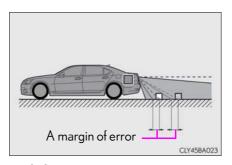


• When the ground behind the vehicle slopes down sharply

The distance guide lines will appear to be farther from the vehicle than the actual distance. Because of this, objects will appear to be closer than they actually are. In the same way, there will be a margin of error between the guide lines and the actual distance/course on the road.



When any part of the vehicle sags due to the number of passengers or the distribution of the load, there is a margin of error between the guide lines on the screen and the actual distance/course on the road.

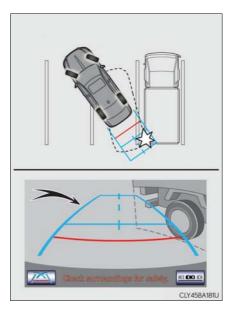


■ When approaching three-dimensional objects

It is not possible to determine the position of three-dimensional objects (such as vehicles) using the vehicle width extension guide lines and distance guide lines. When approaching a three-dimensional object that extends outward (such as the flatbed of a truck), be careful of the following.

Vehicle width extension guide lines

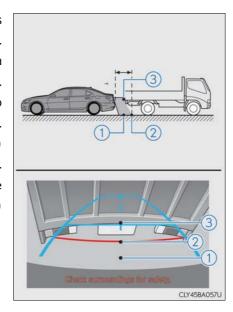
Visually check the surroundings and the area behind the vehicle. In the case shown in the illustration, the truck appears to be outside of the vehicle width extension guide lines and the vehicle does not look as if it hits the truck. However, the rear body of the truck may actually cross over the vehicle width extension guide lines. In reality if you back up as guided by the vehicle width extension guide lines, the vehicle may hit the truck.



4

• Distance guide lines

Visually check the surroundings and the area behind the vehicle. On the screen, it appears that a truck is parking at point ②. However, in reality if you back up to point ①, you will hit the truck. On the screen, it appears that ① is closest and ③ is furthest away. However, in reality, the distance to ① and ③ is the same, and ② is farther than ① and ③.



Things you should know

■ If you think something is wrong

If you notice any of the following symptoms, refer to the likely cause and the solution, and re-check.

If the symptom is not resolved by the solution, have the vehicle inspected by your Lexus dealer.

Symptom	Likely cause	Solution
The image is difficult to see	 The vehicle is in a dark area The temperature around the lens is either high or low The outside temperature is low There are water droplets on the camera It is raining or humid Foreign matter (mud etc.) is adhering to the camera There are scratches on the camera Sunlight or headlights are shining directly into the camera The vehicle is under fluorescent lights, sodium lights, mercury lights etc. 	If this happens due to these causes, it does not indicate a malfunction. Back up while visually checking the vehicle's surroundings. (Use the monitor again once conditions have been improved.) To adjust the image on the rear view monitor system screen. (—)P. 352)
The image is blurry	Dirt or foreign matter (such as water droplets, snow, mud etc.) is adher- ing to the camera.	Rinse the camera lens with water and wipe it clean with a soft cloth. Wash with a mild soap if the dirt is stubborn.

Symptom	Likely cause	Solution
The image is out of alignment	The camera or surrounding area has received a strong impact.	Have the vehicle inspected by your Lexus dealer.
The guide lines are very far out of alignment	The camera position is out of alignment.	Have the vehicle inspected by your Lexus dealer.
	 The vehicle is tilted (there is a heavy load on the vehicle, tire pressure is low due to a tire puncture, etc.) The vehicle is used on an incline. 	If this happens due to these causes, it does not indicate a malfunction. Back up while visually checking the vehicle's surroundings.

CAUTION

■ When using the rear view monitor system

When backing up, be sure to check visually behind and all around the vehicle before proceeding.

Observe the following precautions to avoid an accident that could result in death or serious injuries.

- The rear view monitor system is a supplemental device intended to assist the driver when backing up. Never depend on the rear view monitor system entirely when backing up. Always make sure your intended path is clear. Use caution, just as you would when backing up any vehicle.
- Never back up while looking only at the screen. The image shown on the screen may differ from the actual state, and you could collide with another vehicle or obstacles if backing up looking only at the screen, possibly causing an accident. When backing up, be sure to check in front of and behind the vehicle, both directly and with mirrors.
- Be sure to back up slowly, depressing the brake pedal to control vehicle speed.
- When and how much to turn the steering wheel will vary according to traffic conditions, road surface conditions, vehicle condition, etc. when parking. It is necessary to be fully aware of this before using the rear view monitor system.
- When parking, be sure to check that the parking space will accommodate your vehicle before maneuvering into it.
- Do not use system in the following cases:
 - · On icy or slick road surfaces, or in snow
 - When using tire chains
 - When the trunk lid is not closed completely
 - On roads that are not flat or straight, such as curves or slopes.
- In low temperatures, the screen may darken or the image may become faint. The image could distort when the vehicle is moving, or you may become unable to see the image on the screen. Be sure to check direct visually and with mirror all around the vehicle before proceeding.
- If the tire sizes are changed, the position of the guide lines displayed on the screen may change.
- The camera uses a special lens. The distances between objects and pedestrians that appear in the image displayed on the screen will differ from the actual distances. $(\rightarrow P. 289)$

A CAUTION

■ When using the rear view monitor system screen

- The position of the guide lines displayed on the screen may change in accordance with the number of passengers, the amount of cargo etc. Be sure to check behind and all around the vehicle direct visually and with mirror before proceeding.
- The vehicle width extension guide lines are wider than the actual width of the vehicle. When backing up, be sure to check behind and all around the vehicle direct visually and with mirror before proceeding.

↑ NOTICE

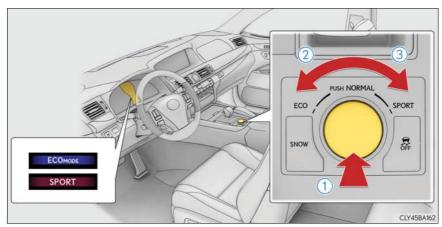
■ How to use the camera

- The rear view monitor system may not operate properly in the following cases, or if the precautions described below are not followed.
 - If the back of the vehicle is hit, the position and mounting angle of the camera may change.
 - As the camera has a water proof construction, do not detach, disassemble or modify it. This may cause incorrect operation.
 - Do not strongly rub the camera lens. If the camera lens is scratched, it cannot transmit a clear image.
 - Do not allow organic solvent, car wax, window cleaner or glass coat to adhere to the camera. If this happens, wipe it off as soon as possible.
 - If the temperature changes rapidly, such as when hot water is poured on the vehicle in cold weather, the system may not operate normally.
 - When washing the vehicle, do not apply intensive bursts of water to the camera or camera area. Doing so may result in the camera malfunctioning.
 - When the camera is used under fluorescent lights, sodium light or mercury light etc., the lights and the illuminated areas may appear to flicker.
- Do not expose the camera to strong impact as this could cause a malfunction. If this happens, have the vehicle inspected by your Lexus dealer as soon as possible.

Driving mode select switch

The driving modes can be selected to suit driving condition.

Vehicles without electronically modulated air suspension



1 Normal mode

For normal driving.

Press the switch to change the driving mode to normal mode when not in normal mode.

(2) Eco drive mode

Use Eco drive mode to help achieve low fuel consumption during trips that involve frequent accelerating.

When not in Eco drive mode and the driving mode select switch is turned to the left, the "ECO MODE" indicator comes on and Eco Driving Indicator Zone Display and average fuel consumption is shown on the multi-information display. $(\rightarrow P.93)$

Also, the driving mode is automatically displayed on the "Side Display". $(\rightarrow P.350)$



(3) Sport mode

Assists acceleration response by controlling the transmission and steering. Suitable for when precise handling is desirable, for example when driving on mountain roads.

When not in Sport mode and the driving mode select switch is turned to the right, the "SPORT" indicator comes on in the multi-information display.

Also, the driving mode is automatically displayed on the "Side Display". $(\rightarrow P. 350)$



1 Normal mode

For normal driving.

Press the switch to change the driving mode to normal mode when not in normal mode.

(2) Comfort mode

By controlling the suspension, riding comfort is further enhanced. Suitable for city driving.

When not in comfort mode and the driving mode select switch is turned to the left, the "COMFORT" indicator comes on in the multi-information display.

Also, the driving mode is automatically displayed on the "Side Display". $(\rightarrow P.350)$



4

3 Eco drive mode

Use Eco drive mode to help achieve low fuel consumption during trips that involve frequent accelerating.

When in comfort mode and the driving mode select switch is turned to the left, the "ECO MODE" indicator comes on and Eco Driving Indicator Zone Display and average fuel consumption is shown on the multi-information display. $(\rightarrow P.93)$

Also, the driving mode is automatically displayed on the "Side Display". $(\rightarrow P.350)$



• SPORTS mode

Assists acceleration response by controlling the transmission. Suitable for when precise handling is desirable, for example when driving on mountain roads.

When not in SPORT S mode and the driving mode select switch is turned to the right, the "SPORT S" indicator comes on in the multi-information display.

Also, the driving mode is automatically displayed on the "Side Display". $(\rightarrow P.350)$



· SPORT S+ mode

Helps to ensure steering performance and driving stability by simultaneously controlling the steering and suspension in addition to the transmission. Suitable for sporty driving.

When in SPORT S mode and the driving mode select switch is turned to the right, the "SPORT S+" indicator comes on in the multi-information display.

Also, the driving mode is automatically displayed on the "Side Display". $(\rightarrow P.350)$



4

Operation of the air conditioning system in Eco drive mode

Eco drive mode controls the heating/cooling operations and fan speed of the air conditioning system to enhance fuel efficiency (\rightarrow P. 394). To improve air conditioning performance, adjust the fan speed or turn off Eco drive mode.

■ Sport mode automatic deactivation

Sport mode is automatically deactivated if the engine switch is turned off after driving in sport mode.

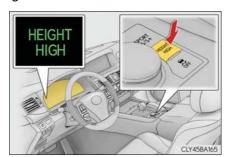
Electronically modulated air suspension*

By independently controlling the damping force of the shock absorbers for each of the 4 wheels according to the road and driving conditions and the selected driving mode, this system achieves ride comfort with superior steering stability, and ensures good vehicle posture. In addition, vehicle height can be selected according to road and driving conditions.

The vehicle height is maintained at the selected level regardless of the number of occupants and luggage weight.

Turns high mode on/off.

When on, the "HEIGHT HIGH" indicator will come on.



4

Driving

Operating sound of the air suspension compressor

When the vehicle height is lowered, such as when entering or loading the vehicle, or high mode is selected, the compressor may operate and a whirring sound may be heard. This does not indicate a malfunction.

*: If equipped

A CAUTION

- Be sure to stop the engine in the following situations in order to stop operation of the electronically modulated air suspension:
 - The vehicle is parked on a curb.
 - Any of the wheels is stuck in a ditch.
 - It is necessary to jack up the vehicle.
 - It is necessary to tow the vehicle with part of it lifted.

If the engine switch remains in IGNITION ON mode, the vehicle height may change, and you may catch part of your body in the vehicle, resulting in accidental damage.

To help enhance driving safety and performance, the following systems operate automatically in response to various driving situations. Be aware, however, that these systems are supplementary and should not be relied upon too heavily when operating the vehicle.

ABS (Anti-lock Brake System)

Helps to prevent wheel lock when the brakes are applied suddenly, or if the brakes are applied while driving on a slippery road surface

Brake assist

Generates an increased level of braking force after the brake pedal is depressed when the system detects a panic stop situation

VSC (Vehicle Stability Control)

Helps the driver to control skidding when swerving suddenly or turning on slippery road surfaces

TRAC (Traction Control)

Helps to maintain drive power and prevent the drive wheels from spinning when starting the vehicle or accelerating on slippery roads

Hill-start assist control

Helps to prevent the vehicle from rolling backward when starting on an incline or slippery slope

4

VGRS (Variable Gear Ratio Steering) (if equipped)

Adjusts the wheel turning angle in accordance with the vehicle speed and steering wheel movement

EPS (Electric Power Steering)

Employs an electric motor to reduce the amount of effort needed to turn the steering wheel

VDIM (Vehicle Dynamics Integrated Management)

Provides integrated control of the ABS, brake assist, TRAC, VSC, hill-start assist control, EPS and VGRS (if equipped) systems

Helps to maintain vehicle stability when swerving on slippery road surfaces by controlling the brakes, engine output, steering assist, and if equipped with VGRS, steering ratio

PCS (Pre-Collision System) (if equipped)

 \rightarrow P. 312

BSM (Blind Spot Monitor) (if equipped)

 \rightarrow P. 324

When the TRAC/VSC/ABS/hill-start assist control systems are operating

The slip indicator light will flash while the TRAC/VSC/ABS/hill-start assist control systems are operating.

The stop lights and high mounted stoplight turn on when the hill-start assist control system is operating.



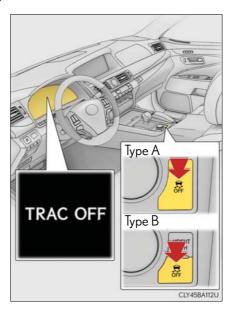
Disabling the TRAC/VSC systems

If the vehicle gets stuck in fresh snow or mud, the TRAC and VSC systems may reduce power from the engine to the wheels. Pressing VSC OFF switch to turn the system off may make it easier for you to rock the vehicle in order to free it.

■ Turning off the TRAC system only

To turn the TRAC system off, quickly press and release the switch.

The "TRAC OFF" will be shown on the multi-information display. Press the switch again to turn the system back on.



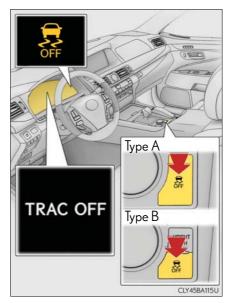
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■ Turning off both TRAC and VSC systems

To turn the TRAC and VSC systems off, press and hold the switch for more than 3 seconds while the vehicle is stopped.

The VSC OFF indicator light will come on and the "TRAC OFF" will be shown on the multi-information display.*

Press the switch again to turn the systems back on.



*: On vehicles with pre-collision system, pre-collision alert braking, pre-collision brake assist and pre-collision braking will also be disabled. The pre-collision system warning light will come on and the "Pre-crash brakes are disabled because VSC is OFF" will be shown on the multi-information display. (
—P. 312)

TRAC and hill-start assist control cannot be operated. Contact your Lexus dealer.

- Hill-start assist control is operational when
 - The system has detected that the vehicle is moving backward.
 - Except 2WD models with paddle shift switches: The shift lever is in the D or S position.
 - 2WD models with paddle shift switches: The shift lever is in the D or M position.
 - The brake pedal is not depressed.
- VGRS is disabled when

VGRS may stop operating in the following situations.

In this event, the steering wheel may move from its straight forward position, but it will return when the system restarts.

- When the steering wheel is operated for an extended period of time while the vehicle is stopped or is moving very slowly
- When the steering wheel has been held fully to the left or right
- When the battery is low or the voltage temporarily drops
- After the engine is started at lower than -22°F (-30°C)

The center position of the steering wheel may change when VGRS is disabled. However, the position will return to normal after VGRS is reactivated.

- Sounds and vibrations caused by the ABS, brake assist, TRAC, VSC, hill-start assist control and VGRS systems
 - A sound may be heard from the engine compartment when the brake pedal is depressed repeatedly, when the engine is started or just after the vehicle begins to move. This sound does not indicate that a malfunction has occurred in any of these systems.
- Any of the following conditions may occur when the above systems are operating. None of these indicates that a malfunction has occurred.
 - Vibrations may be felt through the vehicle body and steering.
 - A motor sound may be heard after the vehicle comes to a stop.
- The steering wheel may be moved slightly or a sound may be heard when the engine is started or stopped. None of these indicate that a malfunction has occurred.

4

■ EPS operation sound

When the steering wheel is operated, a motor sound (whirring sound) may be heard. This does not indicate a malfunction.

■ Reactivation of the TRAC/VSC systems

Even after the TRAC/VSC systems have been turned off, turning the engine off and then on again will automatically reactivate the TRAC/VSC systems.

■ Reactivation of the TRAC system linked to vehicle speed

When only the TRAC system is turned off, the TRAC system will turn on when vehicle speed increases. However, when both TRAC/VSC systems are turned off, the systems will not turn on even when vehicle speed increases.

■ Reduced effectiveness of the EPS system

The effectiveness of the EPS system is reduced to prevent the system from overheating when there is frequent steering input over an extended period of time. The steering wheel may feel heavy as a result.* Should this occur, refrain from excessive steering input or stop the vehicle and turn the engine off. The EPS system should return to normal within 10 minutes.

*: If the LKA (Lane-Keeping Assist) system cannot operate in this case, a warning message will be shown on the multi-information display.

CAUTION

■ The ABS does not operate effectively when

- The limits of tire gripping performance have been exceeded (such as excessively worn tires on a snow covered road).
- The vehicle hydroplanes while driving at high speed on wet or slick roads.
- Stopping distance when the ABS is operating may exceed that of normal conditions

The ABS is not designed to shorten the vehicle's stopping distance. Always maintain a safe distance from the vehicle in front of you, especially in the following situations:

- When driving on dirt, gravel or snow-covered roads
- When driving with tire chains
- When driving over bumps in the road
- When driving over roads with potholes or uneven surfaces

A CAUTION

■TRAC may not operate effectively when

Directional control and power may not be achievable while driving on slippery road surfaces, even if the TRAC system is operating.

Do not drive the vehicle in conditions where stability and power may be lost.

■ Hill- start assist control does not operate effectively when

Do not overly rely on the hill-start assist control. The hill-start assist control may not operate effectively on steep inclines and roads covered with ice.

■ When the VSC is activated

The slip indicator light flashes. Always drive carefully. Reckless driving may cause an accident. Exercise particular care when the indicator light flashes.

■ When the TRAC/VSC systems are turned off

Be especially careful and drive at a speed appropriate to the road conditions. As these are the systems to ensure vehicle stability and driving force, do not turn the TRAC/VSC systems off unless necessary.

■ Replacing tires

Make sure that all tires are of the specified size, brand, tread pattern and total load capacity. In addition, make sure that the tires are inflated to the recommended tire inflation pressure level.

The ABS, TRAC and VSC systems will not function correctly if different tires are installed on the vehicle.

Contact your Lexus dealer for further information when replacing tires or wheels.

Handling of tires and the suspension

Using tires with any kind of problem or modifying the suspension will affect the driving assist systems, and may cause a system to malfunction.

4

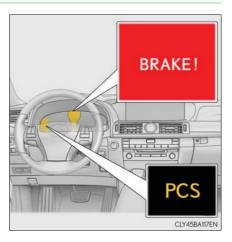
PCS (Pre-Collision System)*

When the sensor detects that a frontal collision is highly likely or even unavoidable, safety systems such as the brakes and seat belts are automatically engaged to help avoid a collision.

Pre-collision warning

When a high possibility of a frontal collision is detected, the precollision system warning light flashes, a buzzer sounds and a message is shown on the multi-information display to urge the driver to take evasive action.

Pre-collision warning can be disabled using the pre-collision braking off switch.



Pre-collision seat belts (front seat only)

If the pre-collision sensor detects that a collision is unavoidable, the pre-collision system will retract the seat belt before the collision occurs. The same will happen if the driver makes an emergency braking or loses control of the vehicle. $(\rightarrow P.40)$

Pre-collision brake assist

When there is a high possibility of a frontal collision, the system applies greater braking force in relation to how strongly the brake pedal is depressed.

*: If equipped

When there is a high possibility of a frontal collision, the system warns the driver using a warning light, warning display and buzzer. If the system determines that a collision is unavoidable, the brakes are automatically applied to help avoid a collision.

When the vehicle is being stopped by pre-collision braking, the brake will be engaged for a maximum of 2 seconds and then released automatically. This pre-collision braking can be canceled by depressing the accelerator pedal or brake pedal.

Pre-collision braking can be disabled using the pre-collision braking off switch.

Suspension control

When there is a high possibility of a frontal collision, the operation of suspension control helps prevent the front of the vehicle from dropping when the brakes are applied suddenly.

Steering gear control (VGRS) (vehicles with camera sensors)

When the system determines that a collision is unavoidable, the steering gear ratio is changed to help improve the response to steering input.

Driver monitor system (if equipped)

When the system determines that there is a possibility of a collision, and either the driver is not facing forward or the driver's eyes are closed, pre-collision warnings are given in advance to warn the driver. If the system determines that the conditions to operate pre-collision alert braking have been met even when the possibility of a collision increases further, pre-collision alert braking will operate.

Pre-collision alert braking can be disabled using the pre-collision braking off switch.

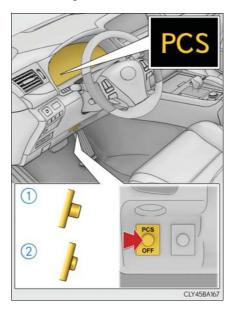
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Disabling pre-collision braking

Pre-collision warning, pre-collision braking and pre-collision alert braking (vehicles with driver monitor system) can be switched between enabled and disabled by pressing the pre-collision braking off switch.

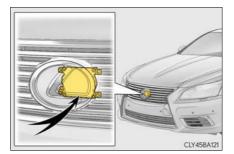
- (1) Enabled
- 2 Disabled

The pre-collision system warning light comes on when the system is disabled.



Radar sensor

The radar sensor detects vehicles or other obstacles on or near the road ahead and determines whether a collision is imminent based on the position, speed, and heading of the obstacles.

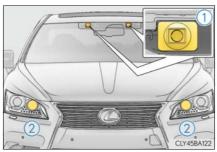


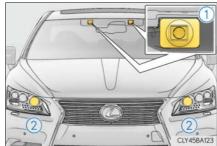
Camera sensors (if equipped)

The camera sensors detect pedestrians and other three-dimensional objects on or near the road ahead together with the radar sensor while the vehicle is moving.

When the headlights are on, near-infrared rays are projected to ensure proper detection performance in the night time.

- (1) Camera sensors
- 2 Near-infrared ray transmitters
- Vehicles with discharge head- ▶ Vehicles with LED headlights lights





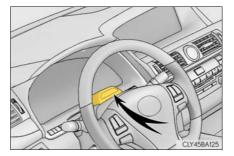
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Driving

Driver monitor sensor (vehicles with driver monitor system)

The driver monitor sensor detects the direction the driver is facing and whether the driver's eyes are open or closed.

The system determines whether the driver is facing forward and whether or not the driver's eyes are closed.



■ The pre-collision system is operational when

- Pre-collision warning:
 - ► Vehicles without camera sensors
 - The pre-collision braking off switch is not pressed.
 - Vehicle speed is greater than about 10 mph (15 km/h).
 - The speed at which your vehicle is approaching the obstacle or the vehicle running ahead of you is greater than about 10 mph (15 km/h).
 - ▶ Vehicles with camera sensors
 - The pre-collision braking off switch is not pressed.
 - Vehicle speed is greater than about 4 mph (5 km/h).
 - The speed at which your vehicle is approaching the obstacle or the vehicle running ahead of you is greater than about 4 mph (5 km/h).
- Pre-collision seat belts (operating conditions A):
 - Vehicle speed is greater than about 19 mph (30 km/h).
 - The system detects sudden braking or skidding.
 - · The front occupants are wearing a seat belt.
- Pre-collision seat belts (operating conditions B):
 - Vehicle speed is greater than about 4 mph (5 km/h).
 - The speed at which your vehicle is approaching the obstacle or the vehicle running ahead of you is greater than about 19 mph (30 km/h).
 - The front occupants are wearing a seat belt.
- Pre-collision brake assist:
 - The VSC OFF switch is not pressed.
 - Vehicle speed is greater than about 19 mph (30 km/h).
 - The speed at which your vehicle is approaching the obstacle or the vehicle running ahead of you is greater than about 19 mph (30 km/h).
 - The brake pedal is depressed.
- Pre-collision braking:
 - ▶ Vehicles without camera sensors
 - The pre-collision braking off switch is not pressed.
 - The VSC OFF switch is not pressed.
 - Vehicle speed is greater than about 10 mph (15 km/h).
 - The speed at which your vehicle is approaching the obstacle or the vehicle running ahead of you is greater than about 10 mph (15 km/h).
 - ► Vehicles with camera sensors
 - The pre-collision braking off switch is not pressed.
 - The VSC OFF switch is not pressed.
 - Vehicle speed is greater than about 4 mph (5 km/h).
 - The speed at which your vehicle is approaching the obstacle or the vehicle running ahead of you is greater than about 4 mph (5 km/h).

- Suspension control:
 - Vehicle speed is greater than about 4 mph (5 km/h).
 - The speed at which your vehicle is approaching the obstacle or the vehicle running ahead of you is greater than about 19 mph (30 km/h).
- Steering gear control (VGRS) (vehicles with camera sensors):
 - Vehicle speed is greater than about 19 mph (30 km/h).
 - The speed at which your vehicle is approaching the obstacle or the vehicle running ahead of you is greater than about 19 mph (30 km/h).
- Pre-collision alert braking (vehicles with driver monitor system):
 - The pre-collision braking off switch is not pressed.
 - The VSC OFF switch is not pressed.
 - The system determines that the driver is not facing forward, or that the driver's eyes are closed.
 - Vehicle speed is greater than about 25 mph (40 km/h).
 - The speed at which your vehicle is approaching the vehicle running ahead of you is greater than about 25 mph (40 km/h).
 - The steering is not being turned.

4

Conditions that may trigger the system even if there is no danger of a collision

- When there is an object by the roadside at the entrance to a curve
- When passing an oncoming vehicle on a curve
- When driving over a narrow iron bridge
- When there is a metal object on the road surface
- When driving on an uneven road surface
- When passing an oncoming vehicle on a left-turn
- When your vehicle rapidly closes on the vehicle in front
- When a grade separation/interchange, sign, billboard, or other structure appears to be directly in the vehicle's line of travel
- When there is a metal plate in the road in front of the vehicle on a downhill slope
- When climbing a steep hill causes an overhead billboard or other metallic structure to appear directly in the vehicle's line of travel
- When driving under an overpass
- When an extreme change in vehicle height occurs
- When passing through certain toll gates
- When driving through a lump of steam or smoke
- When the radar sensor moves off position due to its surrounding area being subjected to a strong impact

When the system is activated in the situations described above, there is also a possibility that the seat belts will retract quickly and the brakes will be applied with a force greater than normal. When the seat belt is locked in the retracted position, stop the vehicle in a safe place, release the seat belt and refasten it.

Obstacles not detected

The radar sensor cannot detect plastic obstacles such as traffic cones. There may also be occasions when the sensor cannot detect pedestrians, animals, bicycles, motorcycles, trees, or snowdrifts.

A camera sensor cannot detect obstacles in the following situations:

- A camera sensor is directly receiving intense light, such as sunlight.
- Visibility is poor because of bad weather or other reasons.
- The sensor temperature is extremely high.
- The headlights are not turned on in darkness such as at night or in a tunnel.

The system may not function effectively in situations such as the following:

- On roads with sharp bends or uneven surfaces
- If a vehicle suddenly moves in front of your vehicle, such as at an intersection
- If a vehicle suddenly cuts in front of your vehicle, such as when overtaking
- In inclement weather such as heavy rain, fog, snow or sand storms
- If the vehicle is skidding when VSC is not operating
- When an extreme change in vehicle height occurs
- When only part of your vehicle's front end collides with, or contacts, a vehicle or object in a frontal collision
- When the radar sensor moves off position due to its surrounding area being subjected to a strong impact
- If an obstacle in front of the vehicle is small
- When the system judges that the driver performed a collision avoidance operation via the accelerator pedal, brake pedal, or steering wheel

■ Automatic cancelation of the pre-collision system

When a malfunction occurs due to sensor contamination, etc. that results in the sensors being unable to detect obstacles, the pre-collision system will be automatically disabled. In this case, the system will not activate even if there is a collision possibility.

■ When there is a malfunction in the system

The pre-collision system warning light will flash and warning messages will be displayed. $(\rightarrow P. 808, 816)$

4

■ Certification

► For vehicles sold in the U.S.A.

FCC ID: HYQDNMWR004

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC WARNING

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Radiofrequency radiation exposure Information:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with minimum distance of 20 cm between the radiator (antenna) and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

▶ For vehicles sold in Canada

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

■ Limitations of the pre-collision system

Do not overly rely on the pre-collision system. Always drive safely, taking care to observe your surroundings and checking for any obstacles or other road hazards. Failure to do so may cause an accident resulting in death or serious injury.

■ Handling the radar sensor

Observe the following to ensure the pre-collision system can function effectively. Otherwise, the system may not function correctly and could result in an accident.

- Keep the sensor and grille cover clean at all times.
 Clean the sensor and grille cover with a soft cloth so you do not mark or damage them.
- Do not subject the sensor or surrounding area to a strong impact. If the sensor moves even slightly off position, the system may malfunction. If the sensor or surrounding area is subject to a strong impact, always have the area inspected and adjusted by your Lexus dealer.
- Do not disassemble the sensor.
- Do not attach accessories or stickers to the sensor, grille cover or surrounding area.
- Do not modify or paint the sensor and grille cover.
- Do not replace them with non-genuine parts.

■ Handling the camera sensors (if equipped)

Observe the following to ensure that the PCS functions effectively:

- Keep the windshield clean at all times.
 PCS effectiveness may be reduced due to the presence of raindrops, condensation, ice or snow on the windshield.
- Do not subject the camera sensor to a strong impact or force, and do not disassemble the camera sensor.
- Do not change the installation position of the camera sensor, or remove and reinstall it. The direction of the camera sensor is precisely adjusted.
- When the windshield fogs up, use the windshield defogger to dry the windshield. During cold weather, using the heater with air blowing to the feet may allow the upper part of the windshield to fog up, having a negative effect on the images.
- Do not place anything on the dashboard.
 Images reflected on the windshield may reduce the effectiveness of the camera sensor.
- Do not scratch the camera lens, or let it get dirty.
- Do not attach a sticker or other items to the windshield near the camera sensor.

Headlights (vehicles with camera sensors)

- Observe the following to ensure proper near-infrared ray projection:
 - Keep the headlights clean at all times.
 - The detection performance may deteriorate if the high beams are misaligned or inoperative.
- The near-infrared ray transmitters project strong energy that is not visible. Although the transmitters normally turn off when the vehicle is stopped, never look into the headlights for your safety.

Determining the direction the driver is facing and whether the driver's eyes are open or closed (vehicles with driver monitor system)

The direction the driver is facing and whether the driver's eyes are open or closed may not be determined correctly if the following conditions exist:

- There is an object between the driver monitor sensor and the driver's face, such as when the sensor is blocked.
- A part of the driver's face is covered.
- The sensor or the driver's face is exposed to intense light such as sunlight.
- The driving posture is improper.
- The vehicle is parked.

■ Handling the driver monitor sensor (vehicles with driver monitor system)

Observe the following to ensure the driver monitor sensor can function effectively.

Failure to do so may result in a malfunction or may prevent the system from correctly determining the direction the driver is facing and whether the driver's eyes are open or closed, resulting in an unexpected accident.

- Do not disassemble, damage, lift or pull on the sensor.
- Do not select the sensor while driving.
- Do not wet or spill water on the sensor.
- Do not drop anything on or allow anything to hit against the sensor. Do not subject the sensor to an impact.
- Make sure that there are no scratches, dirt or stickers on the side of the sensor that faces the driver.
- Do not place any objects in front of the side of the sensor that faces the driver or cover the sensor.

Cautions regarding the assist contents of the system

By means of alarms and brake control, the pre-collision system is intended to assist the driver in avoiding collisions through the process of LOOK-JUDGE-ACT. There are limits to the degree of assistance the system can provide, so please keep in mind the following important points.

- Assisting the driver in watching the road The pre-collision system is only able to detect obstacles directly in front of the vehicle, and only within a limited range. It is not a mechanism that allows careless or inattentive driving, and it is not a system that can assist the driver in low-visibility conditions. It is still necessary for the driver to pay close attention to the vehicle's surroundings.
- Assisting the driver in making correct judgment When attempting to estimate the likelihood of a collision, the only data available to the pre-collision system is that from obstacles it has detected directly in front of the vehicle. Therefore, it is absolutely necessary for the driver to remain vigilant and to determine whether or not there is a possibility of collision in any given situation.
- Assisting the driver in taking action
 The pre-collision system's braking assist feature is designed to help reduce the severity of a collision, and so only acts when the system has judged that a collision is unavoidable. This system by itself is not capable of automatically avoiding a collision or bringing the vehicle to a stop safely. For this reason, when encountering a dangerous situation the driver must take direct and immediate action in order to ensure the safety of all involved.



- Precautions for cleaning the driver monitor sensor (vehicles with driver monitor system)
 - Gently wipe the sensor with a soft cloth to prevent damage.
 - Wipe any excess dirt with a cloth dampened with neutral detergent, all liquids having been wringed out of the cloth. After that, wipe again with a dry cloth.
 - Do not use benzene, thinner, glass cleaners, wax, etc.

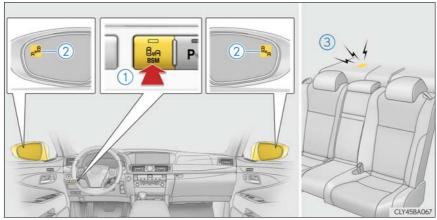
BSM (Blind Spot Monitor)*

Summary of the Blind Spot Monitor

The Blind Spot Monitor is a system that has 2 functions;

- The Blind Spot Monitor function
 Assists the driver in making the decision when changing lanes
- The Rear Cross Traffic Alert function
 Assists the driver when backing up

These functions use same sensors.



1) BSM main switch

Pressing the switch turns the system on or off. When the switch is set to on, the switch's indicator illuminates and the buzzer sounds. Common switch for Blind Spot Monitor function and Rear Cross Traffic Alert function.

*: If equipped

2 Outside rear view mirror indicator

Blind Spot Monitor function:

When a vehicle is detected in the blind spot, the outside rear view mirror indicator comes on while the turn signal lever is not operated and the outside rear view mirror indicator flashes while the turn signal lever is operated.

Rear Cross Traffic Alert function:

When a vehicle approaching from the right or left rear of the vehicle is detected, the outside rear view mirror indicators flash.

3 Rear Cross Traffic Alert buzzer (Rear Cross Traffic Alert function only)
When a vehicle approaching from the right or left rear of the vehicle is detected, a buzzer sounds from behind the rear seat.

4

■ The outside rear view mirror indicators visibility

When under strong sunlight, the outside rear view mirror indicator may be difficult to see.

■ Rear Cross Traffic Alert buzzer hearing

Rear Cross Traffic Alert function may be difficult to hear over loud noises such as high audio volume.

■ When there is a malfunction in the Blind Spot Monitor

If a system malfunction is detected due to any of the following reasons, warning messages will be displayed: $(\rightarrow P. 816)$

- There is a malfunction with the sensors
- The sensors have become dirty
- The outside temperature is extremely high or low
- The sensor voltage has become abnormal

■ Certification for the Blind Spot Monitor

► For vehicles sold in the U.S.A.

FCC ID: OAYSRR2A

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Warning

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

► For vehicles sold in Canada

Applicable law: Canada 310

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Frequency bands: 24.05 - 24.25GHz Output power: less than 20 milliwatts 4

■ Handling the radar sensor

One Blind Spot Monitor sensor is installed inside the left and right side of the vehicle rear bumper respectively. Observe the following to ensure the Blind Spot Monitor can function correctly.

• Keep the sensor and its surrounding area on the bumper clean at all times.



- Do not subject the sensor or surrounding area on the bumper to a strong impact. If the sensor moves even slightly off position, the system may malfunction and vehicles that enter the detection area may not be detected. If the sensor or surrounding area is subject to a strong impact, always have the area inspected by your Lexus dealer.
- Do not disassemble the sensor.
- Do not attach accessories or stickers to the sensor or surrounding area on the bumper.
- Do not modify the sensor or surrounding area on the bumper.
- Do not paint the sensor or surrounding area on the bumper.

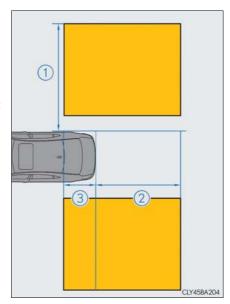
The Blind Spot Monitor function uses radar sensors to detect vehicles that are traveling in an adjacent lane in the area that is not reflected in the outside rear view mirror (the blind spot), and advises the driver of the vehicles existence via the outside rear view mirror indicator.

The Blind Spot Monitor function detection areas

The areas that vehicles can be detected in are outlined below.

The range of the detection area extends to:

- 1 Approximately 11.5 ft. (3.5 m) from the side of the vehicle
 - The first 1.6 ft. (0.5 m) from the side of the vehicle is not in the detection area
- 2 Approximately 9.8 ft. (3 m) from the rear bumper
- 3 Approximately 3.3 ft. (1 m) forward of the rear bumper



4

Driving

A CAUTION

■ Cautions regarding the use of the system

The driver is solely responsible for safe driving. Always drive safely, taking care to observe your surroundings.

The Blind Spot Monitor function is a supplementary function which alerts the driver that a vehicle is present in the blind spot. Do not overly rely on the Blind Spot Monitor function. The function cannot judge if it is safe to change lanes, therefore over reliance could cause an accident resulting in death or serious injury.

According to conditions, the system may not function correctly. Therefore the driver's own visual confirmation of safety is necessary.

■ The Blind Spot Monitor function is operational when

- The BSM main switch is set to on
- Vehicle speed is greater than approximately 10 mph (16 km/h).

■ The Blind Spot Monitor function will detect a vehicle when

- A vehicle in an adjacent lane overtakes your vehicle.
- Another vehicle enters the detection area when it changes lanes.

■ Conditions under which the Blind Spot Monitor function will not detect a vehicle The Blind Spot Monitor function is not designed to detect the following types of vehi-

The Blind Spot Monitor function is not designed to detect the following types of vehicles and/or objects:

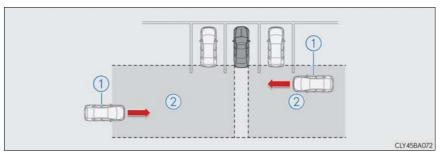
- Small motorcycles, bicycles, pedestrians etc.*
- Vehicles traveling in the opposite direction
- Guardrails, walls, signs, parked vehicles and similar stationary objects*
- Following vehicles that are in the same lane*
- Vehicles driving 2 lanes across from your vehicle*
- *: Depending on conditions, detection of a vehicle and/or object may occur.

- The Blind Spot Monitor function may not detect vehicles correctly in the following conditions:
 - · During bad weather such as heavy rain, fog, snow etc.
 - · When ice or mud etc. is attached to the rear bumper
 - When driving on a road surface that is wet due to rain, standing water etc.
 - When there is a significant difference in speed between your vehicle and the vehicle that enters the detection area
 - When a vehicle is in the detection area from a stop and remains in the detection area as your vehicle accelerates
 - When driving up or down consecutive steep inclines, such as hills, a dip in the road etc.
 - When multiple vehicles approach with only a small gap between each vehicle
 - When vehicle lanes are wide, and the vehicle in the next lane is too far away from your vehicle
 - When the vehicle that enters the detection area is traveling at about the same speed as your vehicle
 - When there is a significant difference in height between your vehicle and the vehicle that enters the detection area
 - Directly after the BSM main switch is set to on
- Instances of the Blind Spot Monitor function unnecessarily detecting a vehicle and/ or object may increase under the following conditions:
 - When there is only a short distance between your vehicle and a guardrail, wall
 - When there is only a short distance between your vehicle and a following vehicle
 - When vehicle lanes are narrow and a vehicle driving 2 lanes across from your vehicle enters the detection area
 - When items such as a bicycle carrier are installed on the rear of the vehicle

1

The Rear Cross Traffic Alert function

The Rear Cross Traffic Alert functions when your vehicle is in reverse. It can detect other vehicles approaching from the right or left rear of the vehicle. It uses radar sensors to alert the driver of the other vehicle's existence through flashing the outside rear view mirror indicators and sounding a buzzer.



(1) Approaching vehicles

(2) Detection areas

A CAUTION

■ Cautions regarding the use of the system

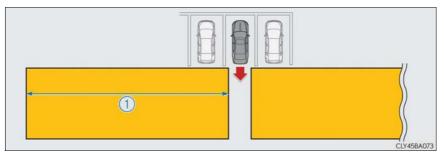
The driver is solely responsible for safe driving. Always drive safely, taking care to observe your surroundings.

The Rear Traffic Alert function is only an assist and is not a replacement for careful driving. Driver must be careful when backing up, even when using Rear Traffic Alert function. The driver's own visual confirmation of behind you and your vehicle is necessary and be sure there are no pedestrians, other vehicles etc. before backing up. Failure to do so could cause death or serious injury.

According to conditions, the system may not function correctly. Therefore the driver's own visual confirmation of safety is necessary.

The Rear Cross Traffic Alert function detection areas

The areas that vehicles can be detected in are outlined below.



To give the driver a more consistent time to react, the buzzer can alert for faster vehicles from farther away.

Example:

Approaching vehicle	Speed	1 Approximate alert distance
Fast	18 mph (28 km/h)	65 ft. (20 m)
Slow	5 mph (8 km/h)	18 ft. (5.5 m)

■ The Rear Cross Traffic Alert function is operational when

- The BSM main switch is set to on.
- The shift lever is in R.
- Vehicle speed is less than approximately 5 mph (8 km/h).
- Approaching vehicle speed is between approximately 5 mph (8 km/h) and 18 mph (28 km/h).

4

■ Conditions under which the Rear Cross Traffic Alert function will not detect a vehicle

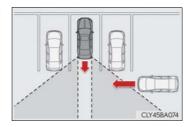
The Rear Cross Traffic Alert function is not designed to detect the following types of vehicles and/or objects.

- Small motorcycles, bicycles, pedestrians etc.*
- Vehicles approaching from directly behind
- Guardrails, walls, signs, parked vehicles and similar stationary objects*
- Vehicles moving away from your vehicle
- Vehicles approaching from the parking spaces next to your vehicle*
- Vehicles backing up in the parking space next to your vehicle
- *: Depending on conditions, detection of a vehicle and/or object may occur.

■ Conditions under which the Rear Cross Traffic Alert function may not function correctly

The Rear Cross Traffic Alert function may not detect vehicles correctly in the following conditions:

- During bad weather such as heavy rain, fog, snow etc.
- When ice or mud etc. is attached to the rear bumper
- When multiple vehicles approach continuously
- Shallow angle parking
- When a vehicle is approaching at high speed
- When parking on a steep incline, such as hills, a dip in the road etc.
- Directly after the BSM main switch is set to on
- Directly after the engine is started with the BSM main switch on
- Vehicles that the sensors cannot detect because of obstacles



Lexus night view

Lexus night view is a system which assists with nighttime driving.

Near-infrared rays are irradiated forward and an image converted from the irradiated light is shown on the Remote Touch screen. The image shows pedestrians, obstacles, and road conditions ahead of the vehicle, which are difficult to see at nighttime with the naked eye.

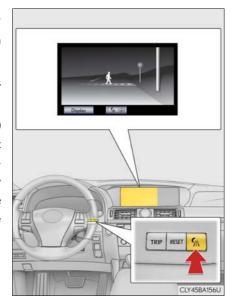
Displaying the Lexus night view

- 1 Turn the engine switch to IGNITION ON mode.
- **2** Turn the headlights on.
- 3 Press the Lexus night view switch.

The Lexus night view is displayed on the Remote Touch screen.

To return the screen to its previous state, press the switch again.

When the light sensor (→P. 227) determines that it is currently night time from the brightness of the surrounding area, the Lexus night view can be operated by pressing the Lexus night view switch while the headlights are on.



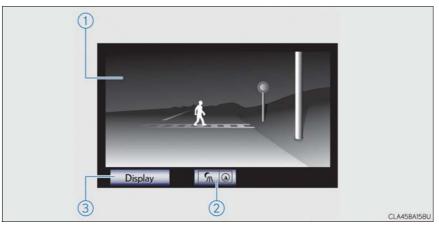
4

Driving

*: If equipped

The Lexus night view display

■ When displaying on the "Main Display" (\rightarrow P. 350)



- 1 Lexus night view screen
- (2) "Side Display" switching button

If this button is selected using the Remote Touch when the Lexus night view is being shown on the "Main Display", the "Side Display" will change to a map display (vehicles with navigation system) or compass display (vehicles without navigation system). $(\rightarrow P.348)$

If the button is selected again, the screen will return to its previous display.

3 Brightness adjustment button

The brightness of the display can be adjusted by selecting this button using Remote Touch.

Make sure to select the "OK" after adjusting the brightness.

- "-": Darker
- "+": Brighter



■ When displaying on the "Side Display"

When another screen is displayed on the "Main Display" while the Lexus night view is being shown on the "Main Display", the Lexus night view screen will be displayed on the "Side Display".

- 1 Lexus night view screen
- 2 "Main Display" switching button

Switches the Lexus night view from the "Side Display" to the "Main Display".



4

■ Imaging range

The image is shown ranging from the tip of the low beam to the high beam.

■ If the vehicle speed is less than approximately 9 mph (15 km/h) when the Lexus night view is operating

An image will be displayed on the Lexus night view screen, but both the range and the distance of the projection will be limited as near-infrared rays are not being radiated outward.

■ When the Lexus night view switch is pressed while the Lexus night view cannot be operated

Advice information will be displayed on the Lexus night view screen. Follow the displayed advice.

If the Lexus night view switch is pressed at a time when the Lexus night view operation is not possible

Follow the advice displayed on the Remote Touch screen.

■ When the shift lever is shifted to R while the Lexus night view is operating

The Lexus night view screen switches as follows.

"Main Display": Switches to the rear view monitor system screen.

"Side Display": The display blacks out and no image is displayed.

■ Before using the Lexus night view

Never depend on this system only.

Lexus night view is intended as a supplemental aid to help you see pedestrians and road conditions ahead of the vehicle. As there are limits to the system, do not rely solely on the system while in use, and drive safely while observing the following precautions.

■ When using the Lexus night view

Observe the following precautions.

Failure to do so may cause an accident resulting in death or serious injury.

- Never drive while looking at the Lexus night view screen only.
- Do not look continuously at the Lexus night view screen while driving. Pedestrians, objects etc. ahead of the vehicle may be overlooked by the system. The system should always be used as a supplemental aid only.
- Lexus night view is designed to help you see objects better when driving in darkness on a road with few curves. Do not use the Lexus night view in well-lit areas or on roads with many curves or slopes. There may be areas that cannot be displayed by the system due to the road conditions (curve size, gradient, etc.)
- Lexus night view may be unable to project some features at an appropriate level of brightness. Some or all parts of certain features may be dark or difficult to see. Do not rely solely on the Lexus night view, and drive carefully while checking the surroundings for safety, as you would with a normal vehicle. Also, the following features and conditions may not be displayed clearly.

Features that are difficult to display:

- Clothing of a pedestrian made of a certain kind of material (ex. leather jackets)
- The characters on signs and billboards
- The information on road signs

Conditions in which display is difficult:

- Unfavorable weather conditions such as rain, fog, snowfall, snow storms etc.
- There are large puddles of water on the road surface following rainfall
- The area of the windshield in front of the camera is fogged up, dirty or icy
- The areas around the headlights are covered with ice, snow, mud etc.
- The battery voltage is remarkably low
- There are bright lights ahead of the vehicle

■The near-infrared light

Follow these precautions to avoid damage to or incorrect operation of the Lexus night view system.

- System performance may deteriorate if the areas around the headlights are dirty. Clean the vehicle if it is dirty.
- The near-infrared ray transmitters irradiate strong energy not visible to the eyes. Do not stare at the light at close range for a long time.

▶ Vehicles with discharge headlights



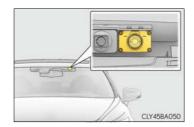
► Vehicles with LED headlights



↑ NOTICE

■ The near-infrared camera

Follow these precautions to avoid damage to or incorrect operation of the Lexus night view.



- Make sure the windshield is kept clean.
- System performance may deteriorate if rain water, condensation or ice adheres
 to the camera. If you notice the inner lens of the camera is dirty, the garnish will
 have to be replaced. Consult your Lexus dealer.
- Do not subject the camera to strong impacts, or disassemble the camera.
- As the alignment of the camera has been very finely adjusted, do not change or remove the mounting.
- If the windshield fogs up, defog the windshield using the front defroster.
- Do not dirty or scratch the camera lens.
- Night view may not function properly if an object is placed on the sensor, or anything that blocks the sensor is affixed to the windshield.